Remarks/Arguments

Claims 9, 12, 14-23, 25, and 36-40 are pending in the present application. The Examiner is thanked for his reconsideration of the claims.

Rejection Under 35 U.S.C. § 103

Applicant respectfully requests reconsideration of the rejection of claims 9, 12, 14-23, 25, and 38-40 under 35 U.S.C. § 103(a) as being unpatentable over Applicants Admitted Prior Art ("*AAPA*") in view of *Uri* ("*Uri*") ("Workload management-many questions", IT Resource Forums, 7-10-2002, XP002290900, pp, 1-4, http://forums1.itrc.hp.com/service/forums/questionanswer.do?admit+716493758+1091180233157+28353475&threadID+25550). As will be explained in more detail below, the cited references do not disclose each and every feature of independent claims 9, 16, and 38.

Regarding claim 9, the Office admits that *AAPA* and *Uri* do not teach that "said decreasing usage does not halt operation of said workload." Nonetheless, the Office states that it would have been obvious to modify the prior art to include such a feature, and that one would be motivated to do so "by the desire to increase the efficiency of *AAPA* by continually executing the workload while performing memory paging." However, this is an improper motivation for so-modifying the prior art because decreasing usage while not halting operation of the workload does not necessarily increase efficiency. Since physical memory is limited, memory paging must be performed whenever the request for memory from the workload exceeds the computing resources available. Regardless of how such a situation is handled, the amount of memory paging required is dictated by the amount by which the request for memory exceeds the available physical memory. As such, halting operation of the workload in favor of performing memory paging would not be less efficient than decreasing usage of the computing resources (by performing memory paging at a reduced rate) while not halting operation of the workload. In a limited-resource environment, the mere fact that workload operation and memory paging are performed simultaneously does not necessarily improve efficiency over a system which only performs one or the other at a time.

Nonetheless, Applicant's claimed invention does provide an advantage over the prior art in that by not halting operation of the workload, it enables the workload to remain responsive to inputs, though perhaps at a reduced speed due to the simultaneous paging operation. The prior art of record does not teach this feature of Applicant's claimed

invention, nor is it obvious in view of the Office's stated motivation. Therefore, it is believed that independent claim 9 is patentable over the combination of *AAPA* and *Uri*.

Claims 12 and 14-15 depend from claim 9, and thus incorporate each feature of claim 9. Therefore, claims 12 and 14-15 are believed to be patentable over the prior art of record for at least the same reasons as those discussed above regarding claim 9.

Regarding independent claim 16, the Office applies similar reasoning as discussed above, stating that it would have been obvious for reasons of efficiency to modify the prior art to enable a workload to continue to operate after initiating a paging out process. However, for reasons similar to those discussed previously, such a modification does not necessarily increase efficiency. Therefore, Applicant submits that insufficient motivation exists for combining this feature of the claimed invention with the prior art. For at least these reasons, claim 16 is believed to be patentable over the prior art of record.

Claims 17-23 and 25 depend from claim 16, and thus incorporate each feature of claim 16. Therefore, claims 17-23 and 25 are believed to be patentable over the prior art of record for at least the same reasons as those discussed above regarding claim 16.

Regarding independent claim 38, the Office applies similar reasoning as discussed above, stating that it would have been obvious for reasons of efficiency to modify the prior art to enable a workload to remain partially operable during paging out of its range of computer resources. However, for reasons similar to those discussed previously, such a modification does not necessarily increase efficiency. Therefore, Applicant submits that insufficient motivation exists for combining this feature of the claimed invention with the prior art. For at least these reasons, claim 38 is believed to be patentable over the prior art of record.

Claims 39-40 depend from claim 38, and thus incorporate each feature of claim 38. Therefore, claims 39-40 are believed to be patentable over the prior art of record for at least the same reasons as those discussed above regarding claim 38.

Claim 36 was rejected under 35. U.S.C. 103(a) as being unpatentable over *Tanenbaum* (Modern Operating Systems, 2nd Edition, 2001, Prentice Hall Intl, New Jersey) in view of *AAPA*. The Office applies similar reasoning as discussed above, stating that it would have been obvious for reasons of efficiency to modify the prior art to enable a workload to retain partial operation (not stopping) during page evicting . However, for reasons similar to those

discussed previously, such a modification does not necessarily increase efficiency. Therefore, Applicant submits that insufficient motivation exists for combining this feature of the claimed invention with the prior art. For at least these reasons, claim 36 is believed to be patentable over the prior art of record.

Claims 37 depends from claim 36, and thus incorporates each feature of claim 36. Therefore, claim 37 is believed to be patentable over the prior art of record for at least the same reasons as those discussed above regarding claim 36.

Finally, the Office asserts that Applicant's previously submitted arguments concerning the *Uri* reference amount to a general allegation that the claims define a patentable invention over the prior art, and that there is no showing in the prior art of record that indicates that HP technology operates as stated. However, Applicants respectfully submit that one skilled in the art considering the *Uri* reference would understand the HP technology as fundamentally operating in the manner stated previously.

As *Uri* states, the HP technology "would attach a debugger to processes that were using too much memory, set a breakpoint, wait until the kernel took the memory back and then released the breakpoint" (page 3 of *Uri*). The setting of the breakpoint constitutes implementation of a stop signal, as the attached debugger will halt the process upon reaching this point. Moreover, the process would not be allowed to continue until "the kernel took the memory back," which one skilled in the art would understand as paging in memory which had been paged out. Until the breakpoint is released, the process is unresponsive, which stands in contrast to Applicant's claimed invention, in which a victim process is not required to stop, but remains responsive despite having exceeded a memory limit. Further, if the Office wishes to rely on HP technology, the Office is invited to make the art of record, with a showing to how it teaches specific elements of the now claimed invention. Applicant notes that the Office has not cited *Uri* as teaching this particular aspect of the claimed invention, but believes *Uri* provides further evidence of the patentability of the pending claims over prior art methods which were known at the time of the invention.

Conclusion

In conclusion, Applicant submits that the pending claims in the present application are patentable over the prior art of record. Therefore, withdrawal of the rejections, and passage of the claims to allowance is respectfully requested.

If the Examiner has any questions concerning the present application, the Examiner is kindly requested to contact the undersigned at (408) 774-6913. If any other fees are due in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No SUNMP453).

Respectfully submitted,
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